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THE NEW YORK
SCIENTIFIC AMERICAN:
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RUFUS PORTER, EDITOR.

TERMS.—$2 a year—$1 in advance, and the remainder in 6 months.

☞ *See Advertisement on last page.*

HERE I AM!

"Where's CROAKER?" some people are crying,
Is his Poetry Mill broken to smash?
For want of a theme is he dying?
Has his powder refused to flash?

Oh, no! but then I've been soaring!
I couldn't have gone farther by steam—
I wakened the witches by snoring,
And went to the moon in a dream!

One day, when I'd finished my croaking,
I took up a lovely cigar;
And while I was puffing and smoking,
I heard a most horrible jar.

I peered through the cloud that was floating
In figures fantastic around me;
And oh! the big crowd that was shouting
And yelling, like imps, that *they'd found me!*

And oh, such a clatter!
"Well, what was the matter?"

Why, forty old parsons were preaching—
And fifty old maids were beseeching—
And two hundred school-girls were screeching
Like owls, from under their bonnets!
And all of the parsons were wheezing—
And all the old maidens were sneezing—
And the girls were all squealing and teazing
About some horrible "*Sonnets!*"

And then with their needles the "*Sewing*" folks led
And stuck them all into my legs;
And bustles by dozens were thrown at my head,
Just the same as you'd throw rotten eggs!

Like witches, they came in by millions—
In my dream, I couldn't tell how—
And the devil was dancing cotillions
In the midst of the rumpus and row!
Such a calling, and squalling, and bawling!
Like maidens when getting the mitten—
And I shook all my bones with my terrible groans,
As I thought of what I had written!

And the needles and pins!—oh, never my sins
Had pricked me so badly before—
And they jammed on the bustles over my muscles,
Till you couldn't have heard me snore!

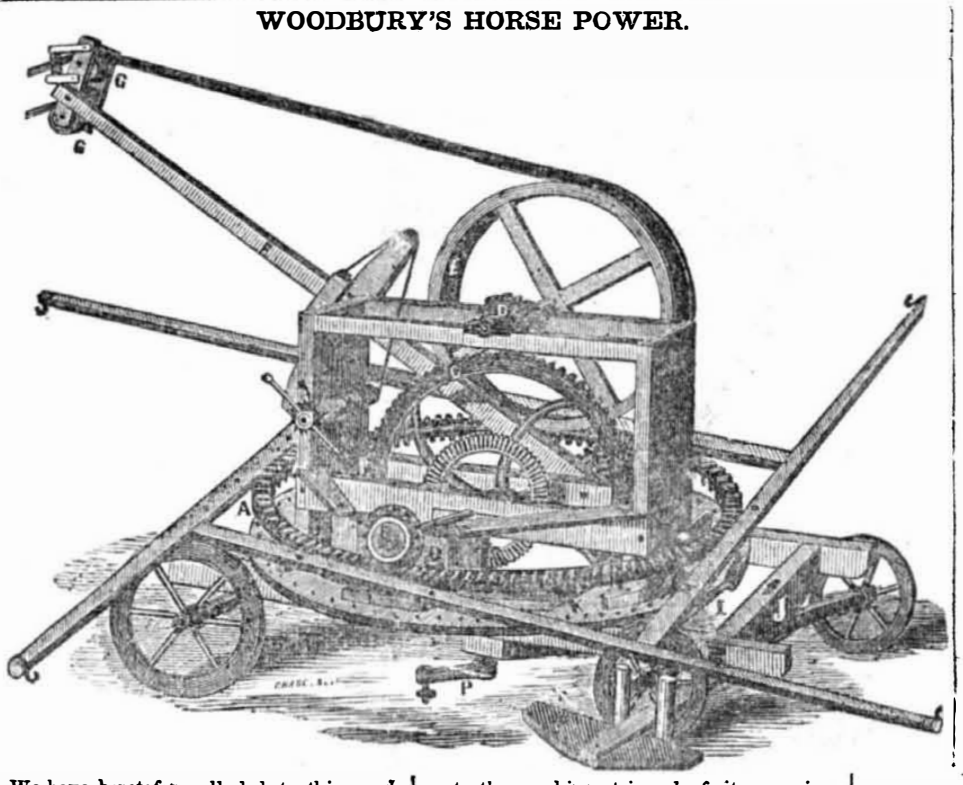
Oh, the pinches and streaks!—it took me two weeks,
Before I got over them straight—
And now I've been trying, while squirming and sighing,
To tell you in rhymes of the horrible times
That have kept me so quiet of late.

CROAKER.

Too large Limits.

"Why don't you limit yourself?" said a physician to an intemperate person: "set down a stake that you will go so far and no farther." I do," replied the other, "but I set it so far off, that I always get drunk before I get to it."

WOODBURY'S HORSE POWER.



We have heretofore alluded to this excellent machine, but have not, until now, had an opportunity of presenting a description with engraving. It is shown by a variety of certificates,—one of which is inserted below,—which the patentee, Mr. Daniel Woodbury of Perkinsville, Vt. has received, that the machine gives complete satisfaction to all who have witnessed its operation.

EXPLANATION.—A, main or sweep wheel about 6 feet in diameter, cast in three parts, and bought with wrought iron. B B, two pinions on an inclined shaft, one above, the other below the main wheel. C, spur gear, on the same shaft with pinions B B. D, small gear, on the same shaft with band wheel E.—F, arm supporting the pullies G G, serving to guide the band above the horses; also, to tighten it by the windlass H. L, O and M, are trucks holding main wheel in place. K, circular base of machine, resting on the carriage frame, and is held in different positions by two clevies, one of which is shown at I. N, anchors, one fastened to each axletree, by bolt and key, on which the weight of the machine in part rests, showing the manner of fastening to the ground. P, crank, on a perpendicular shaft, worked by beveled gear attached to the arms of spur gear C, showing the manner of attaching a cross cut saw, for cutting logs. The cut represents the machine stripped of its covering, showing its interior parts.

CERTIFICATE.

SYRACUSE, November, 17, 1846.

We the undersigned, residents of the village of Syracuse and vicinity, in the county of Onondaga, and state of New York, do certify that we have seen in operation Woodbury's Improved Horse Power, when used for sawing wood, and believing it to be in every respect superior to any other horse power we have seen, do cheerfully recommend it as an article that cannot fail to give the most perfect satisfaction.—It is subject to far less friction; the cogs are much more durable, the wear being hardly perceptible; a much longer band may be used than other horse powers will admit of, giving the operator greater choice of ground, and being permanently mounted on wheels, and operating in any direction, without unfastening from the ground; and being supplied with an arrangement admitting the horses to stop while the cylinder to thresher or saw is allowed to run, rendering it in our opinion perfectly adapted to the wants of the public.

A. G. WILLIAMS, Auburn and Syracuse R. R.
PHILIP COLWELL, Farmer's Exchange,
JOEL G. NORTHUP, Machinist.
SQUIRE J. GREEN, Pattern Maker.

Novel Speculation.

An enterprising Yankee at Canton has recently built a Chinese junk of about 300 tons, fitted and rigged entirely after the Chinese mode, which he intends taking to New York, loaded with every species of China knicknacs, curiosities, &c., to be sold on board after arrival off that city. He takes also a Chinese crew, a theatrical and juggling company, males and females, and every thing curious, illustrative of the manners and customs of the Celestials. The junk will have canvass sails and a *Christian* rudder to make her suitable for the long voyage, but upon arrival at the Narrows, every thing foreign will be replaced by Chinese articles, mat sails, clumsy rudder and all, and the junk anchor off the city in her entire oriental costume and build, where she will remain as a show shop, sale room and mountebank exhibition. It is expected she will make the passage in five months. The cost of the whole affair will be about $30,000, and the "cute" proprietor will undoubtedly realise a large fortune. After having exhausted the U States he has been offered $20,000 to deliver his junk in England. The junks are said to be good sea boats and nothing worse than delay is feared in the voyage.

Resemblances.

Some philosopher has remarked, that every animal, when dressed in human apparel, resembles mankind very strikingly in features. Put a frock, bonnet and spectacles on a pig, and it looks like an old woman of eighty. A bull dressed in an overcoat would resemble a lawyer. Tie a few ribbons round a cat, put a fan in its paw, and a boarding school miss is represented. A cockerel in uniform is a general to the life. A hedgehog looks like a miser. Dress a monkey in a frock coat, cut off his tail, trim his whiskers, and you have a city dandy. Donkeys resemble a good many persons.

It appears that men cling to life in proportion to the slight tenor by which they hold it, and prepare for a long residence on earth, in proportion as the period of human life grows short.

Any gemman whose dog is named Pompey, ought not to expect to associate with the gemman whose dog is named Napoleon.

Mutual Consolation.

A poor married woman was telling a staid lady, somewhat on the wrong side of fifty, of some domestic troubles, which she in great part attributed to the irregularities of her husband. "Well," said the old maid, "you have brought these troul les on yourself. I told you not to marry him. I was sure he would not make you a good husband." "He is not a good one, to be sure, madam," replied the woman, "but he is a great deal better than none at all."

Safety.

A sailor passing through a street in a stormy day, was capsized by a slate blown from a roof by the wind, which struck him on the side of the head; whereupon the sturdy tar declared that the shore would do tolerable well in pleasant weather, but in a severe gale of wind, there was no place for safety like a staunch ship, well found, at a distance from the shore lying to under a close reefed main topsail.

A Dutchman Puzzled.

A journeyman printer lately set out on foot for the interior of Ohio, a distance of five hundred miles with a brass rule and three dollars in his pocket. He soon found himself in Pennsylvania, and being weary, called at the inn of a Dutchman, whom he found quietly smoking his pipe, when the following dialogue ensued:

'Vell, Mr. Valking Stick, vot you vant?'

'Refreshments and repose.'

'Supper and lodgings, I reckon.'

'Yes sir, supper and lodgings.'

'Pe you a Yankee pedlar, mit jewelry in your pack to sheat te gals?'

'No sir; no Yankee pedler.'

'A singing teacher, to lazy to vork?'

'No sir.'

'A cheenteel shoemaker, vot stchay till Saturday night, and lays drunk in the porch over Sunday?'

'No sir! or I should have mended my boots before this. But I am not disposed longer to submit to this outlandish inquisition. Can you give me a supper and lodgings?'

'Trikely. Vot pe you? A book achent taking honest people's money for a little larnin' that only makes 'em lazy?'

'Try again, your worship.'

'A dentist, breaking te people's chaws, at a dollar a schrag, and running off mit old Shambock's daughter?'

'No sir; no tooth puller.'

'Kernolojus, den, feeling de young folks heds, like so many cabbitch, and charging twenty five cent for tellin' their fortunes, like a blam'd Yankee?'

'No—no phrenologist neither.'

'Vel, den, vot te tifle are you?—Choost tell, and you shall have some of te best sausages for supper, and stchay all night, free gratis mitout charging you von cent, mit a chill of whiskey to start on before breakfast.'

'Very well, your honor. To terminate the colloquy without further circumlocution, I am an humble disciple of Faust—a professor of the art preservative of all arts—a typographer, at your service.'

'Votch dat?'

'A printer, sir; a man that prints books and newspapers.'

'A man vot prints noospapers! O! yaw! yaw! By Choopiter—ay! ay! datch it!—A man vot prints noospapers, yaw! Chems, take the gentleman's pack off. Chon, bring some junks to the fire. A man vot prints noospapers! *I wish I may pe shot if I did'nt think you vos a tailor.*'

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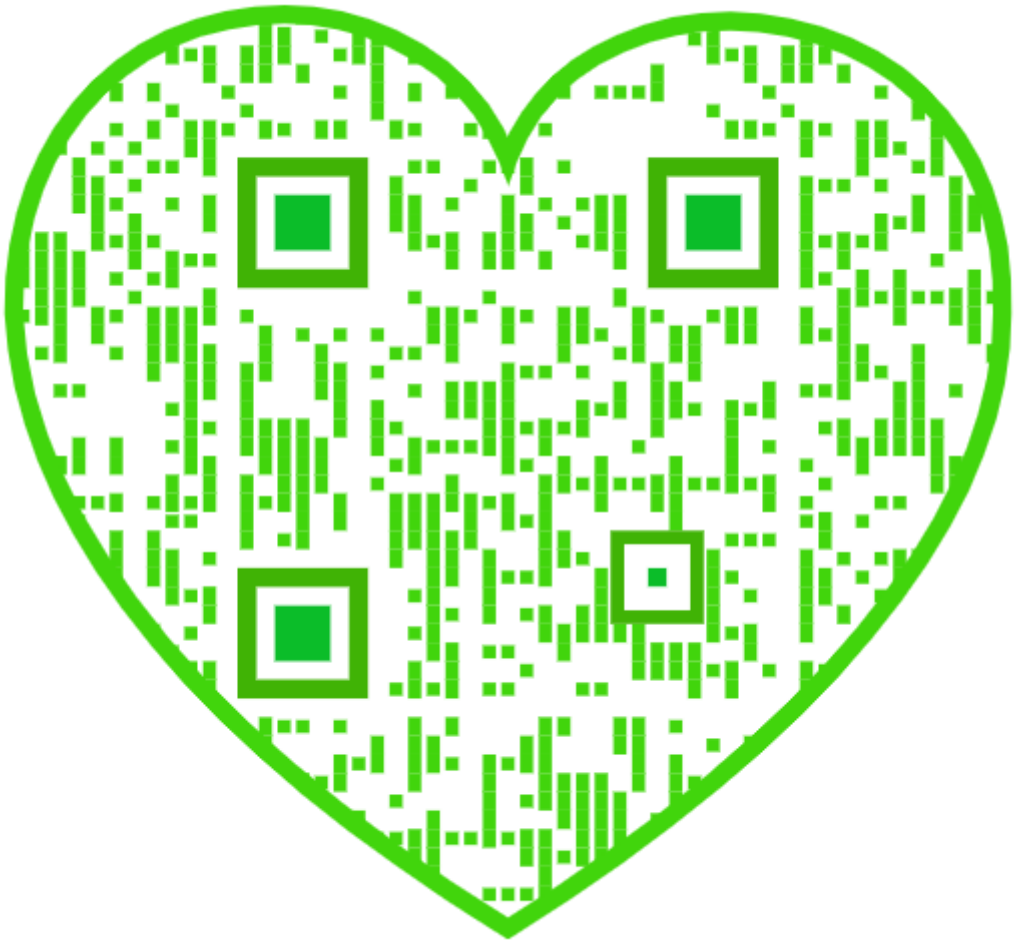

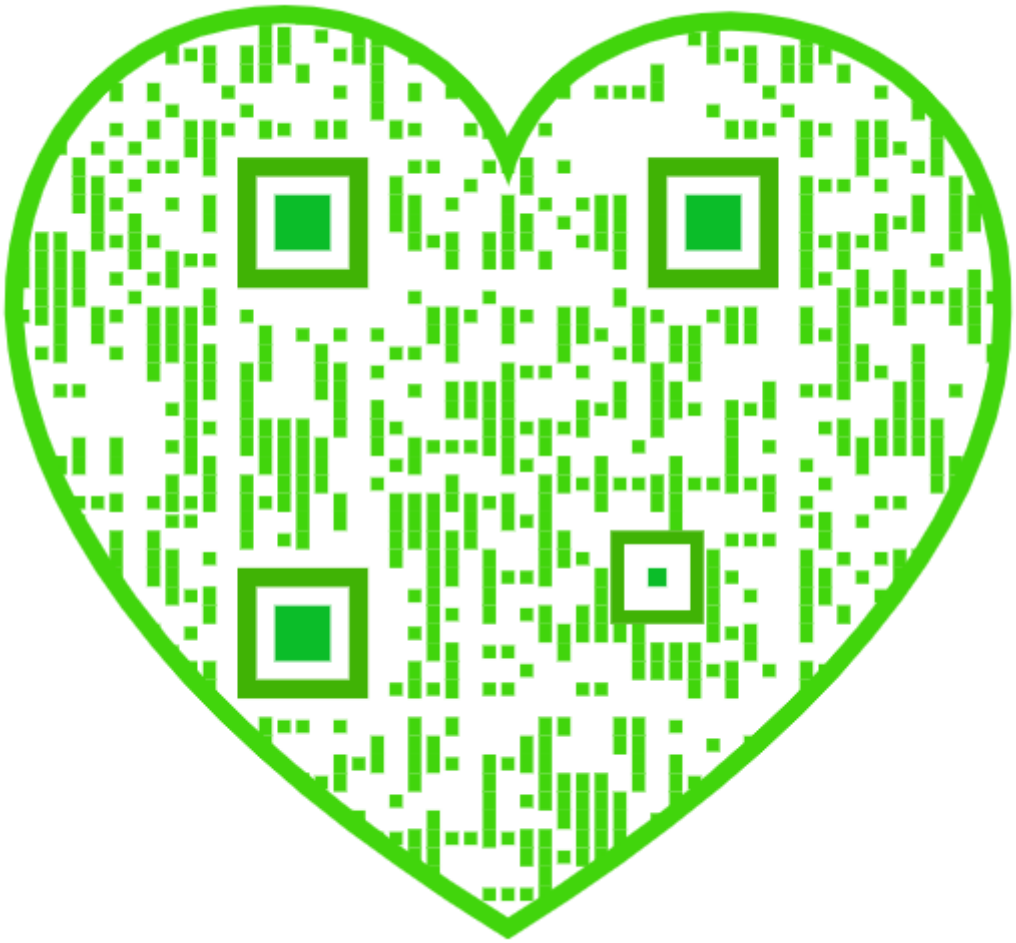

Strange Discovery.

A short time ago the Chief Justice of Gibraltar had some workmen employed at his house; and while one of them was digging near the dining room window, he perceived an opening, which he found was very deep. He with some others and the Chief Justice himself, ventured down the aperture, and after descending about forty feet almost perpendicular, came to a very narrow passage, which led to a most beautiful cave, stalactites hanging about as white as snow, and of various forms —some like cauliflowers. In the midst of all this was a human skeleton, sticking fast to the rock, and the bones of a dog beside it, having become petrified. The bones of the right hand were fastened to the right side of the head, so that the poor creature has the appearance of having lain down and died, very probably of starvation, with his hand under his head, which is half turned round, as if he had been looking up. The bones of the dog lay beside the human bones.

Imported Misery.

The packet ship New World recently arrived from Liverpool, with 300 steerage passengers, many of whom were ragged and half naked children, who were landed over the snow covered wharf, barefooted and bare headed, without home or shelter; and the very first words used by one of them on our shores was to *beg* from a couple of gentlemen who witnessed the chilling scene, money to buy his first meal of victuals and his first night's lodging. Who can blame the forlorn adventurers? Misery and wretchedness are rapidly increasing in the world, and as in the days of Noah, the inhabitants sought the dry land of the mountains, so they now naturally seek our shores as the only sunny land on the globe.—We must not repel them.

Power of Poetry.

A meeting of the stockholders of the Portland and Portsmouth Railroad Company was recently called, to decide on the question of selling their railroad to the Eastern Railrod Company. A report in which a variety of statistical intelligence, and powerful arguments, all adverse to the sale ot the road, was read by Mr. Stephen A. Chase of Salem. This report, in addition to the statistics and arguments, embraced a few well written stanzas of poetry, in *favor* of the sale. The consequence was that the poetry exerted such a controlling influence that the company sanctioned the measure by acclamation, and the sale was accordingly effected.

The Alleghanians.

The Concert given at the Tabernacle on Wednesday evening by this unrivalled band of melodeons and sentimental singers, was highly gratifying to the extensive audience, as evinced by the many rounds of applause. We are glad to see a disposition to patronize this kind of entertainment, which evinces a more refined taste than that of theatrical performances.

Thrilling Incident.

Two little girls in Springfield Mass. last week were playing together, when one of them fell into a well 30 feet deep. When the father came, she was standing with her chin just out of water. The child was got out unharmed.

More Gold.

Another rich gold mine has been discovered on the lands of Mr. Merril, in the vicinity of Asheborough, N. C. The ore will yield by rough process, $50 per bushel.

Abolition of Slavery in Delaware.

The select committe of the Delaware Legislature, to which was referred the petitions of a number of citizens, praying the abolition of slavery in that State, have reported a blll in accordance with the views of the petitioners.

Albany Ale Improved.

We learn from an Albany paper that all the dogs in that city, unless confined or muzzled are to be thrown into the basin.

The Inventors' Institute.

We can congratulate American inventors of mechanical and other improvements, on the prospect of an institution, well calculated to aid in the perfecting, construction and introduction of their productions. We shall explain the principles ot the Institute in our next number, with extracts from the circular, &c.

Enterprise at Albany.

We learn that the citizens of Albany are making large preparations for business for the ensuing season. Messrs. Corning & Co., are making arrangements to build one of the largest and most extensive steam engine factories in the country, below the Greenbush ferry, on the bank of the river. Several large manufacturing establishments are also in contemplation. Carpenters, masons, &c. are already in requisition.

Odd Fellows Moving.

We are gratified to learn that the Order of Odd Fellows, whose charities and benevolence have been so frequently the theme of newspaper praise, are now moving with commendable zeal in sending relief to Ireland. We hope every member will contribute all he is worth, being as he is, protected against personal want by the fraternity.

Southern Plants.

Hon. Henry A. Wise, U. S. Minister at Rio Janerio, has written to the Patent Office a valuable letter, published in the Union, on topics of much agricultural interest. He recommends the transplanting of many Brazillian plants, and says that great service can be rendered to the agriculture of our own country by attenions to the productions of Brazil.

Got them Mixed.

A Norwich paper relates that two ladies at one of the Hotels, each presented her husband with a fine boy, at about the same time; and that in the hurry of the occasion the nurses placed both babies in the same cradle, and were afterwards unable to tell "which from t'other."

Speed of a Whale.

A modern writer calculates that the velocity with which a whale moves through a dense medium of water would carry him, if continued, round the world in a fortnight. A modern locomotive would quickly run him down at that.

A Suspicious Compliment.

A poet asked a gentleman what he thought of his last production, "An ode to Sleep;" to which the latter replied, Indeed Sir you have succeeded so well that it is impossible to read the work without feeling the full *weight* of the *subject*.

An Unfortunate Dutchman.

"Poor Hans! he bit himself mit a rattle snake, and vash sick into his ped for six weeks, in te month of August. Und he could'nt speak till he complained of being a little petter so ash he could stand up on his elbow and eat a little tea."

Paper Making at New Orleans.

The New Orleans Bulletin is now printed on paper manufactured in that city by the publishers of that paper. This is the first instance, probably in which the manufacture of paper has been attempted so far South.

Dark Night.

The night was so dark on the Ohio on the 15th, that the steamboats had to hail persons on the shore to know where they were, and one of the packets, the Swiftsure, ran into a tree and lost both her chimnies.

A Pair of Valentines.

In this city the lady of an officer named Valentine, on Valentine's day presented her husband with twin boys. A pretty fair compliment.

Our Journeymen Law-makers.

A cotemporary remarks that a strange indecision guides the national legislature, except in this, that every project is linked with some scheme of President-making.

Mine of Calamine.

An extensive mine of this valuable ore has been discovered about three miles from Bethlehem, Pa. The ore is remarkably free from any admixture of earthy substance, yielding above seventy per cent of pure zinc.

It is a frequent custom with the New Zealand females to pet young pigs in the same manner that European ladies fondle lap dogs. The Zealanders evince the most correct taste of the two.

The Secretary of the Treasury has advertised proposals for a loan of $18,000,000, in sums of fifty dollars and upward. Bids will be made until the 10th of April.

A vein of silver has been discovered in Dubois Co. Indiana, and a company has been formed, who are now erecting a furnace for the purpose of working the mine.

There is said to be a woman now living in Moscow, in Russia, who is 168 years of age — At the age of 122 she married her fifth husband, and says she is in the market yet.

Green cucumbers appeared in the vegetable markets of Mobile on the 8th. They have been sheltered at times during their growth, but for the most part have been exposed to the weather

About one thousand desertions from the U. S. Army have occurred since the commencement of the Mexican War. Most of these have been in consequence of the stingy rations allowed to privates by law.

It is said that there are on the government pension list (not including navy pensioners) 27,600 names, of whom 6,165 are in the State of New York.

A man by the name of Resolved Soule, sells cider and beer at Fall River, Mass. He had better *resolve* to save his *soul* by quitting the business.

An overseer in Arkansas, while flogging a young slave, recently, without the precaution of tying him, was killed by the slave with a pocket knife.

There are said to be as many slaves in Brazil as in the United States—three millions.—But little is said or known of the domestic policy of that country.

It is recorded of Washington, by the Foreign Spectator, that he *remembered and paid a debt of one cent for crossing a ferry.*—Modern political patriots are not so particular.

Crosses of the French Legion of Honor once so highly prized, have lately been selling in the streets of Madrid at the rate of three for a penny.

A beautiful variegated red and green slate is found in Vermont and is being wrought into elegant articles of furniture. It is susceptible of a fine polish.

One vessel in Boston harbor has twenty tons of powder on board of her. Another was taking on board 170,000 pounds of powder destined for use in the war.

A petition has been presented to the court at New Orleans, to set aside a will, on the ground that the person who wrote it was blind at the time.

Another long train of loaded cars, numbering 122, lately passed over the Western Railroad to Boston. It measured about three quarters of a mile.

There are in Pittsburg, Pa., at present, nine daily newspapers. Fifty years ago the place was a wilderness.

The Washington Union says that 5000 postmasters have recently resigned for want of compensation.

Jerrold says that old bachelors are like dry wood; when they do take flame they burn prodigiously.

Yams, a large kind of sweet potatoes, have been cultivated with success in Kentucky.—Pass them along to the north.

During the recent collection of contributions for Ireland, $1000 was sent in by a lady, without any trace by which the generous donor could be identified.

A man escaped from a Philadelphia Constable, the other day, by leaping over a railing into the Cohocksink Creek, descending about twenty feet, and sinking to his waist in mud. Jack Catch could'nt follow.

LATE NEWS.

The steamship Cambria arrived at Boston on Saturday last, and the principal items of news were published here on the same evening, having been communicated by Telegraph.—The Cambria brought 100 passengers, and $2,000,000 in gold. The proceeds from freight passengers and mails are estimated at $60,000. The commercial intelligence we shall omit.—The foreign papers are much occupied with accounts of appalling distress and destitution. It is stated that there are 350,000 families over and above the ordinary farmers and laborers now destitute in Ireland. In Liverpool, it is stated that no less than 100,000 destitute Irish people have received out-door relief.

The packet ship Prince Albert is on her way home with $400,000 in specie, and insurance has been effected for large sums to come by the next steamer.

Among the passengers by the Cambria, was the renowned General Tom Thumb, accompanied by his parents, &c. There was a wonderful commotion in Liverpool on the occasion of his embarkation. The little General was escorted to the steamer by a large procession of citizens in carriages, on horseback, &c., preceded by a coach and six, containing the General and *suite*, next to which was a band of music in an elegant car drawn by six horses, furnished by Mr. White, proprietor of the Amphitheatre, Liverpool. As the General went on board the steamer, the thousands who had joined in the procession gave him three hearty cheers. The English papers assert that he has received many valuable presents from the principal sovereigns of Europe; has kissed more than a million and a half of ladies; has exhibited before 3,000,000 of persons, and the gross receipts of his exhibitions exceed £150,000, which reckoning 56 sovereigns to the pound avordupoise, would make 3678 pounds weight of gold, and, as the General weighs but 15 pounds, it follows that he has received just 178 times his own weight in gold!

From the Army.

The Albany Evening Journal has information, derived from a gentleman direct from Brazos, who is well informed, that Gen. Scott is making active and effective arrangements for an assault upon Vera Cruz. The place is to be invested simultaneously by sea and by land. A flotilla is in readiness to convey the army to a point within fifteen miles of the Castle. The demonstration is to be made by the 5th, or at the latest, by the 10th of March.

A rumor is in circulation that the whole Mexican Cabinet had resigned, Congress was on the eve of dissolution, the country was in coufusion, another revolution was contemplated, and Santa Anna had suddenly disappeared from San Luis, proceeding to Tampico or the Capital.

The new city of Lawrence, Mass. appears to be very centrally located; being just 23 miles from Boston, Salem, and Newburyport, Mass., and Manchester, N. H.

The ice business is going on at a brisk rate in Massachusetts. At Waldron pond, there is a stack of ice blocks as large as a modern church, ready for the cars.

Henry Clay is nominated for the Presidency by the "Clinton County (Ohio) Whig," and Gen. Taylor's name for the same office floats at the head of the Hagerstown (Maryland) "Torchlight."

A storm lately occurred at Carroll County Md., which prostrated all the trees and fences in its course, and destroyed many dwellings.

Coleman the dramatist, was asked if he knew Theodore Hook? "Yes," replied the wit, "Hook and *Eye* are old associates."

It is proposed to construct a railway from Pensacola to Montgomery, Ala., at a cost of $2,000,000.

Eight vessels have been loading at Norfolk, with a hundred and sixty thousand bushels of corn for Europe.

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ORIGINAL POETRY.

(The two following effusions of lively sentiments, are from the pen of Miss Elizabeth M. Roberts, Marbletown, N. Y.)

Farewell to the Birds.

Farewell little songsters, your bosoms are light,
Your journey is long, but your prospects are bright;
The swift winds of heaven your chariot shall prove,
And bear you safe home to the land that you love,
And when these green mountains are covered with snow,
And when these clear fountains no longer shall flow,
Your path shall be sunny,—your sky shall be clear—
So onward, sweet birds, for your home is not here.
Where the Amazon's waves shall new splendor unfold,
Where the Andes are sparkling with diamonds and gold,
Where the sun in eternal bright summer shall play,
And the soft winds shall rustle the silv'ry spray,
Where the lion and leopard shall seek to repose,
In the shade of the orange tree's fruit-bending boughs,
Where the vulture's shrill cry through the regions are rung,
And the wild tiger bounds to her delicate young.
Such is your home and your prospects are gay,
Oh why should you linger, oh why should you stay;
Your path shall be sunny,—your sky shall be clear—
So onward, sweet birds, for your home is not here.

The Grave of a Drunkard.

Although the fields are green,
Although the sky is clear,
Yet memory's sad revolving scene,
Lies buried here.
A grave alas—alone,
A grave yet heeded not,
A single mossy mountain stone,
To mark the spot.
In this secluded shade,
Where soft winds never cease,
A drunkard's form was lately laid,
To rest in peace.

I saw him borne away,
To that low, lonely cell,
And in my heart could only say,
Fare thee well.
Few suns have rose and set,
Few nights have closed the day,
When in life's busy march I met
Him on his way.
With tottering step and slow,
He wandered o'er the plain,
I little thought he'd never go
That path again.

I little though that death,
Was then so very near;
And in a few short days that he
Would slumber here.
Alas! how unprepared,
That thoughtless soul must be,
When hurl'd from life into a vast
Eternity.
With horror, rage and strife,
He has resigned his breath,
Unhappy in this worldly life,
And so in death.

But mortals could not save,
The poor expiring one,
And weeping nature could but say,
Thy will be done.

Marbletown, N. Y., Feb. 1847.

Extravagant Vanity.

It is stated that during Victoria's visit to Arundale Castle, (21 days,) the Dutches of Sutherland, one of the maids of honor, put on no less than seventy new dresses! that she regularly changed her costume four times a day, and that she paid one of her female attendants five hundred dollars a year, who was called her combination maid, and who is solely occupied in harmonizing or combining her various articles of dress, so as to produce a new and happy effect.

Meteorology.

The following communication from our respected correspondent, E. Meriam, Esq. goes to show the manner in which distant disturbances are indicated by the apparatus used by him, and which have been described in a former number.

Earthquake in Scotland.

A smart shock of an earthquake has been experienced over a pretty extensive district in the centre of Scotland. About midnight on Tuesday, Nov 24th, Crieff, Cupar, Perth, Dundee, Fife and Dollar, had all felt the shock, which appears to have occurred almost simultaneous throughout the extensive tract of country which comprehends these towns.—*Scotchman.*

Dollar.—Shortly after 12 o'clock this morning, (Wednesday,) we experienced a smart shock of an earthquake, the first that has been felt in this neighborhood since the 23d of Oct. 1839. It awoke many sleepers from their slumbers, and seemed, as far as we could judge, to vibrate from west to east. By persons recumbent in upper apartments, the motion of the houses was distinctly and somewhat alarmingly felt. The night was damp, dark and cloudy, with scarcely a breeze stirring, and of a very mild temperature; exactly such as the night of the 23d Oct., 1839.—The Barometer had risen during the day to about 29 44, but this morning it has again sunk a little. Altogether the character of the weather, this autumn, has resembled that of 1839 very much. A great quantity of rain, (about 27 inches since July); the sky for the last month charged with close, dense, dark clouds, the atmosphere soft, mild, hazy and dripping, with an irregular barometer, taking sudden and extreme movements. It is to be remarked, that these earthquakes happen generally in October and November, during the night, when there is little or no wind, with soft rain falling, the earth's surface being heavily charged with moisture.—*Scotchman.*

Violent shock of an Earthquake—On the night of the 24th of November, a few minutes before 12 o'clock, a shock of earthquake was felt here of greater intensity and longer duration than any remembered. The state of the atmosphere at the time was calm and beautifully clear. Early on the previous morning, a very heavy rain had fallen, which had cleared and softened the temperature, and the following day was unseasonably fine and mild, the thermometer standing about 52 degrees.—At 9 o'clock in the evening, it had fallen to 42 degrees, the barometer indicating 29 50 inches. The greatest cold during the night was 36 degrees, the barometer inclined to rise, standing next morning at 29 51 inches.

The reeling of individuals during the shock, depended greatly on their situation. It is most generally described as being rather tremudous than undulating, and in high tenements heavy articles of furniture were violently shaken, bells were rung and crockery ware overturned. Every family was alarmed, and many rushed out to the streets, under the impression that their houses were falling.

Such as were walking at the time, described the ground as shaking under their feet, much like the tremulous motion in steamboats. The duration of the shock, from all accounts, must have been from 15 to 20 seconds, although the fears of many naturally led them to think it longer.

It extends as far north, as our accounts yesterday reached, and along the line of the Grampians it seems to have been particularly severe. Our correspondent at Crieff writes last night, thus:—

At 12 o'clock, perhaps two minutes after it a low rumbling, resembling thunder, but one which a practiced ear could at once detect as the herald of an earthquake, was heard. For five or six seconds it approached nearer and nearer, and roared louder and louder; then came a heavy under ground shock or two, then a sensible upheaving and downfalling, accompanied by a violent shaking of every thing on the surface, and the thunder-like noise continuing for six or eight seconds, died away in the distance. This may not have been the heaviest shock of earthquake that has occurred in Crieff for the last 50 years, but it certainly was a very smart one, and caused many a timid heart to quake. The air before and at the time of the shock was calm and still, but a short time thereafter a fresh breeze sprang up.—*Perthshire Courier.*

Recorded Observations made by E. Meriam upon Brooklyn Heights, and published in the Brooklyn Daily Evening Star.

From the Star of November 24th.

The highest temperature yesterday, was 52, from 11 to 12. The temperature at 6 P. M., was 48. at which it had continued till 6 this morning. E. M.

The highest temperature, on Tuesday, was 55 1-2, at 2 P. M.; at 5 in the evening, 50°; at 8 and 9, 49°; at 10 and 11, 50; and Wednesday morning at 6, 7 and 8, 49°, with a rain storm following the equilibrium of Tuesday morning. E. M.

The highest temperature indicated by the meteoric wires on Wednesday, was from 11 to 12, 52 deg., on Thursday 47 deg., at both ends of the day; on Friday, 49 1-2, from 12 M. to 5 P. M.; on Wednesday evening at 7, 47; at 8, 44, and at 9, 46; on Friday morning at 6, 46; on Friday evening at 5, 50; at 7, 52; at 8, 51.

The ordinary thermometer indicated as follows:

Wednesday morning, Nov. 27, at 9, 39; 3 P. M. 39; 9, 29; Thursday morning at 6, 26; at 9, 28; at 12 M. and 3 P. M. 32; at 4, 29 1-2; from 4 to 6, 28; at 7, 27; from 8 to 9, 26 1-2; on Friday morning, at 6, 24 1-2; at 1 P. M. 32; at 2, 31; at 3, 30; from 4 to 8, 31 1-2; at 9, 32 1-2; Saturday morning at 6, 36; at 7 and at 8, 37 1-4.

Snow fell at half past 6 on Wednesday evening. Snow clouds were in the west on Friday morning, before sunrise, and overhead at 2 in the afternoon.

Another disturbance in the atmosphere is indicated by equilibriums and rise of temperature in the night time.

(*To be continued.*)

Evaporating in Vacuo.

Mr. Editor—There appears to be a very prevalent opinion in regard to evaporating liquids, especially under a vacuum, which is very erroneous, and ought to be corrected.—Most people suppose that the lower the temperature at which a liquid is made to boil, the less fuel it takes to evaporate it, but such is not the case. There is no fuel saved in evaporating in vaces. I will not deny however, that there is an advantage in evaporating many liquids in vacuo, such for instance, as the syrup of sugar, and many vegetable infusions which are intended for medicines, because the ordinary heat of such liquids when boiling at atmospheric pressure, would have a tendency to discolor the fumes, and dissipate much of the active principle of the latter, thereby injuring their quality. But what I do say, is, that in point of economy in fuel and time, there is nothing saved. Suppose for instance we take two boilers or evaporating pans of exactly the same dimensions, and containing precisely the same quantity of water, to one we attach a condenser, the other we leave open to the atmosphere; we will suppose the one having the condenser attached, boils at 100° Fahr'. the other of course must be heated to 212° Fahr'. we shall find after having condensed the same weight of fuel under each, that the water remaining in each is the same in quantity. It is true that much the largest volume of vapor has escaped from the one under the vacuum, but the vapor was much more expanded and rare, and only at a temperature of 100°, and having an elastic force of 1,86 inches of mercury; and 100 cubic inches will weigh 1, 1173 grains, while 100 cubic inches of vapor at 212° will weigh 14.9629 grains, equal to 1339 cubic inches of the former, while the sums of the latent and sensible heat are the same in both cases for equal weights of vapor, so that although 13,39 volumes of vapor have passed from one boiler, while one volume only has passed from the other, still, both have been produced at the same expense of fuel, and the same diminutive of water. Therefore I repeat; there is no saving either of fuel or time in evaporating in vacuo.

Yours, &c A Subscriber.

Remarks.—We are not prepared at present to prove the fallacy of the point of theory advanced by our correspondent, but we are far from being convinced of its correctness. The principle, if correct, is immensely important, and will at once prove by analogy, that the quantity of steam produced under any degree of pressure, is in proportion to the quantity of fuel applied, and that as much water is evaporated under a pressure of 100 lbs. to the square inch with an equal quantity of fuel, as in the open air. Having witnessed the rapid evaporation of water at a temperature below 40 degrees, and that without any fire or fuel, but by merely removing the atmospheric pressure, we must retain the opinion that the theory of "Subscriber," is utterly at variance with facts. —Ed.

The oldest Inhabitant.

In a former number we stated that this individual had been actually found out, and made known. Our uncle of the *Scientific American*, insinuated that our *discovery* was an *invention*. If it had been we should have taken out a patent for it; but in order to settle the question beyond all cavil, we wrote to a neighbor of Col. Rowley for authentic information, and received the following reply.

"*Granville, N. Y. Feb.* 4, 1847.

"J. Munsell, Dear Sir: I last night received a line from you inquiring the age of one of my respected neighbors, Col. L. T. Rowley, keeper of the Exchange Hotel in this place, and the best hotel in the State of New York. Col. Rowley is said by some to be 150 years old, and by others 175; the only question seems to be which of the two statements is the most authentic. I have heard him say that he was 175 years old, and have no reason to doubt his word, he being a man of truth and veracity.—But sir, if you have any doubts as to his age, please call on Col. Rowley, and if he cannot establish his birth and pedigree to your entire satisfaction, further reference will be given.

Yours respectfully,

J. E. T."

Mr. Porter will probably be satisfied now We can assure him, that, from further information on this subject, gathered from the most reliable sources, we have reason to believe, Col. Rowley has the faculty of imparting to his guests the true secret of his own great longevity, by the aid of which others may attain equal length of days, unless they should meet with some of those unlucky pull backs, to which all flesh is liable. All who desire to live long, will do well to repair to the hospitable mansion of the Colonel, who seems to possess the true elixir of life, so long and fruitlessly sought for by the ancients!—*Mech. Jour.*

Ahem!—Yes;—well; cant help it, but—we have recently heard or read the statement that many of the Cumanche or Hitimikik Indians claim to be from 150 to 300 years old; and one nice old squaw declared that she was a thousand, although she had never enjoyed the preservative influence of a *liquor bar.*—Ed. Sci. Am.

New Post Office.

Mr. Editor.

Now that the question is raised as to where the Post Office should be started, I think that the small square of lots, with the few wooden buildings and coal yards upon them, at the corners of Canal, Centre, Elm and Walker streets, should be chosen for the site of a new Post Office and Mint worthy of a city like this. By looking at a map of the city you will find it to be the most reasonable point, being most central and yet nearer to the most business parts of the city than to those up town, who are now obliged to walk from two to four miles; while those in the lower extremities have not to walk more than a quarter of a mile to the present Post Office, and as poor as well as rich have business with it, I think there is, at present, a very unfair advantage given to those about Wall street, and down town generally. Yours, Clinton.

A Case of Conscience.

A celebrated liquor importer in Boston, recently had his pocket book, containing a large sum of money- cut from his pocket while entering church. A few days subsequent he received the pocket book through the post office (postage unpaid,) accompanied by a note, in which the writer stated that after spending the money, he discovered to his utter horror that he had been making use of funds obtained in the infamous liquor traffic. He, therefore, returned the pocket book, and would do the same by the money should he be able again to lay hands on it.

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NEW INVENTIONS.

Kingsley's Compensating Spring.

This spring is particularly calculated for the draught and bumper of railroad cars, but will answer equally well for riding springs. The invention consists of a metallic tube or cylinder, within which is a piston and rod.—The space between the cylinder and the rod, is occupied by a cylinder of prepared India rubber, extending from the piston to the cylinder-heads, being connected to both : or two cylinders of the rubber may extend from a central piston to the cylinder-heads at each end ; or two pistons may be employed, with rods extending through the cylinder-heads in opposite directions, the space between the two pistons being also occupied by a cylinder of India rubber. The springs may be constructed to give any required motion, and conform to any degree of force required. We are not informed whether they have ever been put to actual test and cannot certify with regard to the utility or durability of the invention. Mr. J. L Kingsley of this city, is the inventor.

Improved Axletree.

We recently noticed certain improvements in carriage springs, by a young man in Norwich N. Y. (erroneously printed Norwich, Ct.) and have recently received a description and drawing of a novel improvement in carriage axletrees, from the same inventor. The improvement consists of a cylindrical friction roller attached to the underside of each end of the axletree. A groove or cavity is made in the axletree to accommodate the roller, which has a pivot at each end which has a bearing in the iron; or if the axletree be of wood, it is supported by a strap or bar of iron with two shoulders to accommodate the bearings of the roller. These rollers sustain the weight of the carriage, and relieve the boxes of the wheels from both friction and wear. The pivots of the rollers will be exposed to wear, but may be renewed at trifling cost, as often as required.—It is the intention of the inventor, Mr. Wm. S. Thomas, to secure the invention by patent.

Improvement in Saw Mills.

Mr. C. D. Wright. of Haddam, Ct., has recently invented and put in operation, a tail block for saw mills, with important improvements, whereby the position of the log is adjusted in either direction as required by the machinery, connected and secured in its place without any immediate attention from the sawyer. It is possible, though we cannot promise, that we shall procure an engraving, and give a full description of this improvement.

New Rotary Steam Engine.

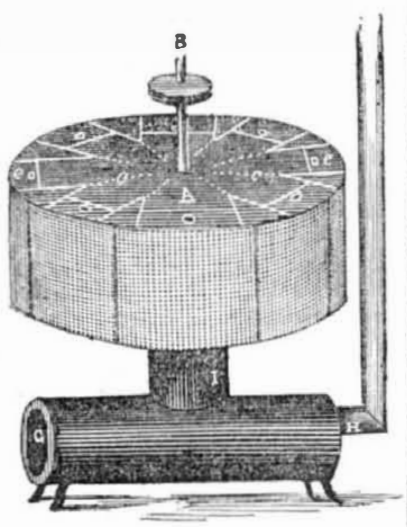
We have received a neat operating model of a rotary steam engine, which appears to approach somewhat nearer perfection than any plan heretofore introduced. It is so constructed as to keep perfectly steam tight without packing and may be so adjusted as to cut off the steam at any required point of each revolution, thus allowing the steam to operate expansively.—We have made arrangements to present a full description with illustrative engravings in our next number. The inventors are Messrs. Lindsley & Tompkins of Newark, N. J.

Improvement in Leyden Jars.

To the Editor of the Scientific American.

In the structure of the common Leyden Jar, we recognise the operation of the principal of *induction.* An electrified body, (the inner surface,) is brought very near to an unelectrified body, (the outer surface,) without the possibility of communicating with each other, because the glass is a non-conductor. Now if the two surfaces could be brought *nearer* each other, the effect of induction would be stronger ; that effect being inversely as the square of the distance. Accordingly, the thinner the jar, the more powerful is the charge it will receive ; but " the danger of breaking prevents our employing such as are very thin." Now to obviate this difficulty, I would suggest that a tin or brass vessel be made nearly the shape of the common Leyden jar ; and the inside together with that portion of the outside usually left bare, be covered with shellac varnish or melted shellac, (that substance being the best non-conductor.) Part of the inside should also be covered with tin foil as in common Leyden Jars. Yours, &c. S. W. N.

Rotary Drying Machine.



New inventions on new subjects are always more interesting, than mere modifications of something that is already in common use.—The machine here introduced is a new invention for a new purpose, or for a purpose for which few if any mechanical inventions have ever been used;—that is, for facilitating the drying of wool, cloths, or other fibrous articles. It consists of a hollow cylinder, A, six feet in diameter by three feet axis, or breadth of periphery; and mounted on a vertical shaft B. The two disks, or cylinder heads are of iron plate, and the periphery consists of wire gause, the meshes or wires being from 1-4 to 1-2 inch apart. Another periphery of wire-work is adjusted within the cylinder, about six inches centreward from the first; and from this circle, eight radius partitions, *c c,* extend nearly to the centre. The space between the two peripheries, is to contain the article to be dried ; and this space is closed above and below by iron plates *e e,* constructed to slide centreward occasionally in properly constructed grooves, and having knobs for that purpose attached. The article to be dried is received through the gates in the upper disk, and discharged through those at the bottom. Below or near the cylinder is a furnace G H, and this furnace is enclosed in a cylindrical iron casing, from which a funnel I, ascends to a circular aperture in the centre of the bottom of the working cylinder. The vertical shaft is furnished with a pulley, to receive a band whereby the machine is put in motion, when the centrifugal force produced by the partitions draws the heated air from the casing of the furnace and forces it through the wool or other material between the peripheries. Wet or moist wool may in this way be dried in five minutes.—This invention is susceptable of variations of position and form : the motion of the cylinder may be vertical, if prefered, and the furnace may be made of any required form or position. The inventor, Mr. S. N. Risley of this city, will apply for a patent in a few days.

Foster's Window Springs.

We have seen and examined a specimen of this excellent improvement, and find it equal to the recommendations heretofore published. We have made arrangements for a neat model, which will soon be exhibited at this office.

A Uniform Atmosphere for the Asthmatic and Consumptive.

In the course of the experiments of our fellow-townsman, Mr. Bennet Woodcroft, (says the London Times,) on the deoxydizing of indigo for calico printing he had constructed for him, by Mr. William Fairbairn, a wrought iron air-tight chamber, of considerable dimensions, for the purpose of obtaining an atmosphere devoid of oxygen, in which to carry on the process of printing cloth with indigo in the soluble state This chamber, which was so constructed, with double doors, &c., as to be air-tight, was 36 feet in length, by 12 feet wide and ten feet high. In the roof of this chamber a tap was inserted, communicating with a reservoir of coal gas, and a pipe inserted into the floor, conveyed the atmospheric air from the chamber. It was remarked that when the tap supplying the carburreted hydrogen was opened, there was no smell perceived at the outer end of the pipe in the floor, through which the air was expelled, until the whole chamber was completely filled with gas, and then it issues in a pure state, from the pipe below, thus showing, in a striking manner, the levity of the gas, and how little it commingles with the atmospheric air. Mr. Woodcroft was accustomed to be shut up in this chamber, full of gas, together with a young man, a workman, both wearing firemen's hermetically closed helmets, with flexible tubes, through which the atmospheric air was supplied for inspiration, and the carbonic acid gas respired was carried away. The air forced into the helmets, and breathed by them, was thus somewhat denser than the atmospheric air outside, the pressure being also uniform. Under these circumstances, both Mr. Woodcroft and the young man assisting him, experienced an unusual degree of buoyancy and exhiliration, almost equal to that caused by the inhalation of nitrous oxide. This suggested to Mr. Woodcroft the idea of a sanatorial chamber, in which, as in this case, a uniform pressure of air should be secured,—which is easily attainable under such circumstances, for it can be regulated exactly by a mercury lute. In this sanatorial chamber, filled, not with any deleterious gas, but with atmospheric air, at one carefully regulated temperature and pressure, Mr. Woodcroft would place persons suffering from incipient consumption, asthma, and other diseases of the chest or lungs ; being persuaded that the relief it would afford to the respiratory organs, under such circumstances, would be a most important aid to the curative means applied, and to the restorative and reparatory efforts of nature to replace the impaired structures. The suggestion of such a chamber, for such experiments, at least, was made by Mr. Woodcroft at the time, to some members of the faculty ; but the suggestion was not recorded at the moment—and, subsequently, when some parties wished to try experiments of this kind, it was too late for the iron chamber, having served its purpose, had been broken up : and thus a favorable opportunity was lost for trying a very interesting experiment in connexion with a large and often fatal class of diseases, to which inhabitants of this humid climate are peculiarly liable.

Sleep and Life of Fishes.

Sleep is necessary to the health and well-being of all animals ; fish require sleep as well as rest. Porpoises are caught while slumbering on the surface of the water ; indeed, it rarely happens that they are taken in any other condition. Sleep, with fish, is not inconsistent with motion. Floating in comparative security, the fish sleeps ; but under such circumstances of nervous irritability, than an agitation of the water, greater than when it first begins to repose, rouses it to flee from impending danger. Fishes which have been domesticated in garden ponds, to feed at the ringing of a bell, uninterrupted by their natural enemies, or the fear of them, sleep more than in their primitive condition, surrounded by a variety of species. It is inferred that they sleep, from their remaining in one position many hours, regardless of objects. In glass bells, the gold fish sleeps regularly through the night. Aquatic mammaliæ sleep less, as they are obliged to come to the surface very frequently to breathe.

Ingenious theories have been devised, in relation to the mode by which the age of fishes might be determined. Carp have been known to live in wells, through the long life-times of several proprietors, which had been there an unknown period, before any particular interest was taken in them, so that one hundred and fifty years have been noted in the life of several, without any material change being manifested in their condition. A vulgar belief that they purify the water, still induces country people to put them in their wells. It has also been remarked that their number under such confinement, rarely increases. It is probable that cartilaginous fish would live to a far greater age than spinous, as it requires a long time for the cartilages to become ossified, whereas, on the other hand, the spinous, as a natural result, undergo changes by age, corresponding, to some extent, with terrestrial animals. Old age eventuates in death, though cold-blooded creatures are so tenacious of life, having an almost indestructible irritability, that we have reason to believe, under some circumstances, they survive several centuries. Birds, next to reptiles and fishes, oftener die of age than quadrupeds. A goose lived in the farm yard of a father, son and grandson, in England, 83 years ; how old it was when they first came in possession of her was unknown, and how long she would have lived, having been accidentally killed, is equally problematical. Turtles, of the terrapin kind, have been found from time to time, with dates on their shells, indicating an age as great as the first settlements of the colonies in which they are found.—Naturalists have partly agreed that the series of rings on the ends of the vertebræ, indicate the spinous fishes' age—upon the supposition that a deposition of ossific matter is annually deposited, like the albumen of trees, by which their age is determined. Such a method is objectionable, as the bulk of a known species, having hundreds of circles, would ultimately rival, in size, the largest whale.

Vitiated Appetites.

The following extract is from Fowler's 'Universal and Mental Phisiology,' and being in accordance with our own experience and observations, we insert it for the benefit of 'whom it may concern.' After a brief allusion to the inconvenience and pernicious tendency of a perverted appetite, the author remarks :—

"The fact of this abnormal condition of appetite is rendered apparent by this cause.—That a most intimate inter-relation exists between the stomach and Alimentiveness is rendered perfectly clear both by Phrenology and Philosophy. The latter is the organ of the former, and therefore the inter-relation of all their states with each other is perfectly reciprocal. This reciprocity must be perfect, in order that when the stomach requires food, it may excite the feeling of hunger in Alimentiveness. But for such inter-relation, the stomach could never make known its requisitions for food. The perfection of the nutritive process demands such reciprocity, that it may be perfect. Whatever, therefore, inflames the stomach, thereby excites Alimentiveness and creates cravings akin to hunger. Excess of food necessarily inflames the stomach, and of course always provokes those hankerings after food, which most of us mistake for real hunger. Yet such cravings are caused, not by hunger, but by surfeiting. This shows why dyspeptics generally have such enormous appetites. They have inflamed their stomachs, and this renders their appetite morbid, and its cravings insatiable. And the more such eat, the more they crave. Let them eat and eat by the hour together, they still feel what they call hungry, though it is to true hunger, what fever is to the circulation. Eating, so far from satiating this morbid craving, only enhances it. True, they feel weak, gone, faint and ravenous—feel that they shall drop down, unless they can get something to eat soon—yet the more they eat the more they crave, because the more they inflame the stomach, and of course its cerebral organ, Alimentiveness. Cannot such see that they eat twice as much as men in general, and four times the quantity of many around them who enjoy uninterrupted health ? How can they require so much when others get along so much better with so little ? What could more conclusively prove that their craving and diseases proceed from their gluttony ? And what establishes this fact beyond a doubt, is that protracted abstemiousness will diminish these stomach gnawings. Make trial, ye thus afflicted, and you will be surprised at their decrease. And, in general, those who feel faint in the morning till they eat, ravenous before dinner, and hungry before supper, should attribute these cravings to an overloaded stamach, instead of an empty one. And they who suffer much from omitting a meal may depend upon it they over eat. Fasting gives little inconvenience to a healthy stomach ; nor is there a more sure sign of gluttony than these hankerings, and this faintness when a meal is omitted. Contradictory though it may seem, yet of all such cravings, persevering abstemiousness is a perfect cure, because it allays that irritation of the stomach which causes, them, and which full feeding enhances, and thereby reinflames appetite. Only try its virtues, ye thus afflicted. Fast instead of feast ; and keep fasting till you can, like those in health, omit meal after meal with little inconvenience or prostration.

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NEW YORK, FEBRUARY 27, 1847.

Progress of Enterprise.

We are very much gratified that the manufacturing interest of our country is everywhere prosperous and increasing. We learn through our exchanges, that at the new city of Lawrence, they are expending money by millions. At Springfield, a new company has been organized, as has been stated in a paragraph already published, which will absorb two or three millions of capital. It is an error, we learn, in this statement, that English capitalists are concerned in it. Only one of the leading men of the company is an Englishman, and he is about removing to this country. One of them is from Baltimore and one from Philadelphia.

In Pennsylvania, it is stated that a large establishment called the Clinton Iron Works, has been put in operation near Pittsburgh.—It contains eleven furnaces, and will consume 12 tons of pig iron per day in the manufacture of bar, boiler, sheet, and all sizes of small iron. A nail factory in one of the wings of the building has eight machines in operation. The fly wheel of the engine in use in these works, weighs twenty-three tons, and measures thirty two feet in diameter.

Josiah Barber, Esq., is erecting a large carpet factory at Auburn. The building is five storie shigh, the basement used as a machine shop, 150 feet long by fifty wide, and of sufficient capacity for 90 power looms, each of which can turn out twenty yards of carpeting a day, making 1800 yards daily. A power loom is to be used, invented by Mr. Avery Babbit, of Auburn, said to be more simple in its construction, and consequently cheaper than those used at Lowell. The capital to be employed on the erections and business is to be $100,000

At Bangor, the Whig states that Messrs. T. & J. Collet find their orders for files greatly increasing, and they have now commenced the manufacture of files of various kinds. They have heretofore mostly confined themselves to the business of re-cutting old files, making them equal to new, but as the stock of old files has run short, and their cut of files being so much approved they have commenced the general manufacture, and will, we doubt not, increase it to an extensive business.

The immense increase in the iron business is peculiarly gratifying. Alate number of the Pittsburg Gazette publishes the name of fifty-one furnaces for smelting iron all located upon the Alleghany river, and these independent of those on the canal. We learn through its columns that :—

"There are now 12 rolling mills, 11 in operation, and the other in market for metal.—These work up from 75 to 100 tons per week, say 75 all around, or 900 tons per week. Then there are the host of foundries, one of which has melted 25 tons per day, and will average probably 100 tons per week. Should the mills run full time till spring, the supply is a tolerable one, and no more ; and were the new tariff not directly brought in a weight on the market, it would speedily be cleared of all the iron on it.

The amount of iron in the shape of pig metal and blooms, annually marketed in Pittsburg is about forty thousand tons; all of which is here manufactured and distributed over half of the Union, in iron fabrics of every description.

Probably no market out of Europe is capable of bearing so great amount of iron at once as Pittsburg, and there is none on this continent where any thing like so heavy an amount is sold in so short a time. Pittsburg is emphatically the iro city of the Western World."

The Montgomery (Alabama) Flag speaks of the recent discovery of bituminous coal on the Iberville river in such quantities as to supply any demands that may arise at as low a price as the Pittsburg coal.

Benefit of Railroads.

The great beauty of railroads, after all, is the continuity they give to business. There is not that interregnum in trade that used to prevail in this city for one quarter of the whole year. Formerly, when the canal and river closed, business closed also. Five years ago, our merchants, during the winter season, were as "idle as vagabonds"—"A gaped at B., who yawned it back again." Now, however, they are as busy as pettifoggers—many of them actually doing a better business in January than they do in July. But these good effects of constant intercourse are not confined to the city alone: Our country friends enjoy as many, if not more of its benefits than we do.

The completion of the Boston road raised the value of every farm in the country 20 per cent. Who put the price of pork up to six dollars? The Boston speculators. How come Boston speculators in our market? The railroad brings them here. Before that was completed, the buyers of produce in Albany enjoyed a sort of monopoly of the business. Being few in number, and having no competition, often made the prices to suit themselves; which prices our agricultural brethern were either obliged to take, or else store their produce till spring brought opposition and strange faces among us. And then there's the country merchant; before railroads were hatched, it was their custom to make their purchases only twice a year. Now they come in once in two or four weeks, the year round. By this facility they require much less capital, are able to avail themselves of new styles of goods, and run much less risk from change in markets, from having on hand a large stock of unsaleable goods, and from being caught with an insufficient assortment. The importing merchant is also benefitted, for, instead of having to make sale at particular seasons, for which he must provide a large stock, that may not be sold out at the proper season, he is continually on sale, supplying his customers throughout the year. The retail merchant is not less benefitted, for his country customers are daily brought by the easy and rapid car, with the same facility in winter as in summer. The manufacturer gets his supplies of raw material as he needs them, and sends his goods to market as fast as made.

In addition to the persons above mentioned, carmen, hotel keepers, hackmen, laborers, and others, find their occupation continued throughout the year, with a regularity that is peculiarly beneficial, enabling them to earn at least 20 per cent, more during the year than they could before railroads were introduced. In short, every species of industry—either of a mercantile or agricultural nature, has been so promoted by the introduction of the iron horse and hot water that it would almost tire figures to ascertain its limit.—*R. R. Jour.*

Mr. Calhoun and the Presidency.

In the course of a debate in the U. S. Senate a few days since, Mr. Calhoun, in reply to some remarks relative to his position before the country, said: " If the Senator, when he spoke of an aspirant for the Presidency, intended his observation to apply to me, I would tell the Senator that he is entirely mistaken. I am not, and never have been an aspirant for the Presidency. I would tell the Senator, furthermore, that I would not so much as turn upon my heels for the purpose of being elevated to the Presidency."

Glowing picture of a Storm.

Professor Meriam, speaking of a storm which occurred between the lakes Ontario and Champlain, in Sept. 1845, says: " This storm was led by the lightning in a terrific blaze of vivid fire, curtained by clouds of dismal blackness, blowing a tornado's blast, and followed by a frozen cloud that threw down hail stones of every size and shape amid the roar of terrific peals of deafening thunder. This storm was three hours crossing the wilderness during which it occasionally ascended high into the atmosphere and again descended to the earth with increased force and thus continued until it vanished at the summit level of the Champlain Canal where the waters run to the Atlantic at opposite points of the compass."

The terms of the capitulation at Monterey, have been vindicated and triumphantly sustained by the officers of the army who aided General Taylor in achieving that victory.

A Drunkard on Fire.

Dr. Nott, in his lectures, gives the following account of a young man, about 25 years of age :

"He had been a habitual drinker for many years. I saw him about 9 o'clock in the evening on which it happened; he was then as usual, not drunk, but full of liquor ; about 11 o'clock the same evening I was called to see him. I found him literally roasted, from the crown of his head to the sole of his feet. He was found in a blacksmith's shop, just across from where he had been. The owner, all of a sudden discovered an extensive light in his shop, as though the whole building was in one general flame. He ran with the greatest precipitancy. and on throwing open the door, discovered a man standing erect in the midst of a widely extended silver-colored flame, bearing, as he described it, exactly the appearance of the wick of a burning candle in its own flame. He seized him (the drunkard) by the shoulders and jerked him to the door, upon which the blaze was instantly extinguished. There was no fire in the shop, neither was there any possibility of any fire having been communicated to him from any external source. It was purely a case of spontaneous ignition. A general sloughing soon came on, and his flesh was consumed or removed in the dressing, leaving the bones and a few of the larger blood-vessels ; the blood, nevertheless, rallied round the heart, and maintained the vital spark until the thirteenth day, when he died, not only the most loathsome, ill-featured, and dreadful pictured that ever was presented to human view, but his shrieks, his groans, and his lamentations, also, were enough to rend a heart of adamant. He complained of no pain of body ; his flesh was gone. He said he was suffering the torments of hell ; that he was just upon the threshold, and should soon enter its dismal caverns; and in this frame of mind he gave up the ghost."

Gold in Santa Fe.

An officer of the army under General Kearney writing from Santa Fe, says: The principal value of this country will, at some future day, be found to exist in its mineral wealth. I have seen very fine specimens of gold from the mines in this vicinity, worth $19,50 per oz.—The very low state of mechanical knowledge has no doubt prevented, to a very great extent, the working of valuable mines; and whenever this has been taken by the Mexicans, it has been attended with so much expense and labor that they have often failed to be a source of much profit to those engaged in them. When peace shall take place, the Americans will change this matter, for the Yankee will appear here with his "notions" from the East: the schoolmaster will be abroad in the land, and their native enterprise and ingenuity, with their proverbial industry, could not find a better field for their exercise and consequent success. Labor is required everywhere to obtain gold, and it is certainly as essential here as elsewhere.

Peruvian Sympathy.

News of the victories of our troops in Mexico had been received, and El Commerico, the leading paper of Peru, says:

" We are turned into Yankees. We desire with all our hearts the triumph of the United States and if possible the annexation of Mexico, in order to consolidate as much as possible the grand system of republican government on our continent. The result of all may be the final extinguishment of all monarchical remains in America."

Father Moussa.

A frequent visitor at the Tuileries of late, where he has a seat by the Queen's side is Father Moussa, a jet black African priest, who excites great interest by accounts of his missionary labors in Senegal. Many of the nobility have invited him to their tables, and large sums have been subscribed to build him a new church. Through his exertions over six hundred Roman Catholic priests have signed a petition for the abolition of slavery in the French colonies, to be presented to the next Chambers—over eight thousand other signatures follow.

It is said that a grandchild of "Billy Gray," formerly the richest man in Boston, is now a pauper in the almshouse in Dorchester, Mass.

Cold Spring Iron Works.

On the western bank of the river Thames, a mile and a quarter, perhaps, below Norwich Landing, beside the New London Turnpike, stood, some time ago, a brewery and distillery. The ground is now redeemed for more beneficent uses, furnishing the site of the Cold Spring Iron Works. The business is carried on by a joint stock corporation, of which Mr. Huntington is president. The building is of the most simple character, no other being requisite, of one story high, like a blacksmith's shop, with sky-lights, but without a floor.—The sight of it reminded us of the Millerite Tabernacle in Boston; and a glance at the works within by no means served to drive away the thoughts of the end of the world which the exterior had awakened. The establishment was first commenced in September, 1845. The preparations having been completed in April, 1846, the work was begun ; but almost immediately afterwards was brought to a very sudden termination by the occurrence of a fire which consumed the building. In the month of June next following, the shop having been rebuilt, the work was resumed.—The building is 117 feet by 85.

The business is the rolling of iron into bars by means of machinery, rather a novel one in this part of the country, and well worth a visit from strangers. The stock is scrap and pig iron. The first is collected in the vicinity ; the pig is obtained at the greater markets.—The whole is American.

From six to ten tons of coal a day are used; a fact which will help to give some just idea of the magnitude of the operations. The coal was formerly brought from Pennsylvania; but at present tha Pictou and Sidney coal is employed to feed the fires.

Steam power is the kind used ; the engine being of a hundred horse power. The manufactured iron amounts to about 1200 tons a year, representing a value of $100,000 or more. Most of this is furnished to order; the remainder goes to the New York market.—The mill is kept running on an average only five days in the week, by which time the furnace commonly needs repairs, and is suffered to cool for the purpose. No inconsiderable part of the business is the manufacturing of hoops for whaling casks.

The company employ about forty men, who make good wages, getting, when the works are in operation, about two dollars a day.

Mexican Hospitality.

The kindness and hospitality of the Mexican ladies at Parras are highly eulogized. At the time of Gen. Wool's departure from that place, there were 13 invalid soldiers too much weakened by sickness to accompany the army. On this occasion some 50 or 60 Mexican ladies, favorable to the American cause, visited the hospital, every one of whom sought it as a favor that she might be permitted to take home one of those suffering soldiers, where she might be able to nurse and restore him to health.

The St. Lawrence.

The only great river in the world, which is not subject to rise or fall in its course of two thousand miles, except by action of the wind, is the St. Lawrence. The greatest drought does not lower it, the greatest rain and most abundant dissolution of snow does not raise it but a few inches.

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FOREIGN CORRESPONDENCE.

No. VII.

Cathedrals, Monks, Inigo Jones, Wren, &c.

LONDON, Jan. 1847.

My dear Sci.—

Those were splendid ages which produced the architectural monuments of England, that even in their partial decay or ruin everywhere arrest the eye of the traveller. If the monks who originated them were bad men they had a capital taste, and while their jolly round bellies absorbed the "fat things full of marrow," and "wine on the lees," they had a keen eye for the beautiful and good. I could pardon them for many frailties of flesh, for many a quip and joke, however unbecoming the sanctity of their calling—for these proud memorials, which in the shape of Cathedrals and Abbeys, they have left to delight our vision and inform our sentiment of beauty. There are in England twenty eight cathedrals, either of which ought to immortalize its builder. In nearly one style of architecture and design, they present a picture gorgeous beyond all simple visions of what can be wrought from stone, mortar and oak. Happily our age cannot imitate them, because of their cost; and if it could, I should not like to see it done, as it is the mellowness given to them by age, with the charm of associations that can never recur again, at least for many ages; that lends a spell to heighten even the perfection of art. The tombs of kings, crusaders and saints, are potent to invest such temples with a halo, that belongs to no simple magnificence of choir, nave, transept and spire; and such tombs are only for the past. Cathedrals seem to have been erected to inhume the splendid genius, exhaust the wealth, and monument the ages that gave them birth. St. Paul's, though the second wonder of the world for its size and proportions, is by far less interesting as a specimen of cathedrals, than many others I could name. It is Grecian in its style, which detracts not a little from its beauty, while its position buries it like a hermit in the midst of a noisy metropolis, and by confounding it with profane milliner shops and bazaars, shears it of half its glory. But most of the Gothic Cathedrals have locations that give strength to their beauty, and enhance the labors of art.—Among others, I have been through those of York, Winchester, Salisbury and Litchfield, four perhaps the finest in the world. I say this without having seen those of Antwerp, Nimses and Milan. At least they are the finest in England, and if England has produced after Rome, the finest single structure in the world, St. Paul's; and an Abbey that stands without a rival, it is fair to infer that her taste in matters of Gothic Cathedrals, is equally good. As I said, they are all similar in style, built in the form of a cross, a design suggested by the zeal of the early Christians, to whose pious toil and munificent means, under guidance of a set of monks, who, I can believe to have been intellectual beyond all the credit we give them, and devout lovers of God, nature, art and good living, as their works attest, —we owe all this profusion, aye exuberance of splendor. The Cathedral being formed like a cross, has its choir, nave and transept, which is the short intersecting part of the cross—and over which rise the two spires that generally form the grandest feature of the cathedral. To what purposes these buildings were altogether given in past times is not altogether clear, since there are those who hint at underground vaults, and dungeons "dark and deep," but now it is very plain that they are used for religious services only. In the olden time, entering the nave in front you had an unobstructed walk and view from end to end, save the two rows of pillars, which, rising from the marble floor to the roof, support in conjunction with the side walls, three arches, of which the roof was formed. And what a splendid sight! Three, four and five hundred feet stretched away the tassellated pave, closed by an immense arched window, filled with stained glass, imaged in colors beautiful almost as the Iris, with saints, cherubs, angels, and it may be, the Holy One himself,—while the fretted roof all wrought into glistening splendor, seems to sit like a feather's weight on its tapering pedestals; and the space of breadth, mingling with the length and height, rushes over one like a current of air in a mountain pass, full of solemn and thrilling power. I know there are those who would look upon these places, with holy horror, because forsooth they were built by monks, Catholic monks, but I confess that without wishing afterwards to be shrived, I rushed in at every occasion, and felt all suddenly religious enough, from the very poetry and glory that was round me, to mutter 'aves,' and say 'paters,' or whatever other language might convey my overwhelming feeling of admiration and adoration. I could have walked on a hatchet to worship in such a place; climbed up any jagged rock to get a closer and more confidential peep at the glowing saints and angels on the windows, and hugged even a monk in my delight at his exquisite taste in framing the temples of his God. And all alone in these, with not even a sexton to worry your ears with his "showman's tale," what a divine glow comes over the spirit, lofty, pure, sanctifying, and filling one with humility as he contemplates all this magnificence, the pomp of human skill; and lifting his eyes higher, beholds the universe—heaven, piercing down through the very roof, with a power and presence, that proclaims its infinite prouder perfection, its exhaustless grandeur and endless duration. It is such a sight as this, or one in the desert, or on the mountains, or the ocean, that lifts the mist from my perceptions of God; that sends me forth for days and years to feel a new and exalted sense of the immensity and splendor of the universe, and the altogether unspeakable glory of its builder. If man delights and thrills me by his art, God astonishes and confounds! You stamp your foot—you speak, and the great round echoes come rolling about your ears like ponderous trumpet tones vibrating in all the space at once. The monks had no organs to fill their cathedrals with a sea of music, but I can imagine their choirs of human voices, wearing all carnal sounds, and "devilish interventions" from roof to floor, clean out and away from these majestic piles. Many of the earliest cathedrals were built, or partially so, in the Norman style, with the arches of their entrances and windows almost square, but when the more striking Gothic came in vogue, they were altered, and, in some instances, the marks of change from square to pointed arches, is plainly traceable on the walls. In modern times, the disposition of the interiors has undergone entire revolution. The choirs have been fitted up with all the appliances of ordinary churches, and their entrances ceiled up from the transept, leaving nothing open and grand as in the olden time, except the nave. Almost the only complete room in the Norman style, that I have seen, is the Bishop's Consistory at Litchfield. I like the Gothic spire, but I like the Norman arch better, there is something of the massive about it which no other style can parallel. Whoever visits England may see two of the most beautiful specimens extant, at the London Tower, and the Chapel of the Knight Templars, or Crusaders, in London.—This latter is exceedingly grand, and was the work of Inigo Jones, whose genius, like that of Wren's, has given some of the rarest architectural triumphs to England. In London, there are between thirty and forty structures designed altogether by Wren. Of these St. Paul's stands first of course, though his gem is St. Stephen's Church, which is worth visiting London to see. The Palace at Greenwich, and Hampton Court, were also designed by Wren—the first is now an Hospital, the other was Cardinal Wolsey's Palace, given by that strange man to Henry VIII. But one of the most beautiful creations of Wren, is the spire of St. Martin's Church, corner of Trafalgar Square. He was especially famous for spires, and this is his finest. While it shoots skyward to a dizzy and immense height, it has no heavy or ponderous look, but sits like a tapered hectagon staff on the building, with which it has beautiful proportion. But to the Cathedrals: I said we could not build them in our day, and why? Because they would involve an amount of expense that we can get a better interest for in other investments, and Christians nor men of the world, are not disposed to squander upon ideas of beauty. Beside, Cathredrals are not fitted to our forms of worship, they are too huge and roomy, and require too much penance of knees. When St. Paul's and most of the English Cathedrals were erected, common laborers were paid only a penny day, and the cost was immense at that—and now we have no men to work for a penny.—Look at your Trinity Church, what has that cost? and you might stow some half a dozen such in a first class Cathedral. And there is not one of the first or third class, that is not in every respect of elaboration and gorgeous finish, superior vastly, to Trinity. Fretted roofs and oak carvings, with all the intricacies of tassellated pavements and Mosaic altars, we know nothing about in our places of worship. There is the single Chapel of Henry VII. (one of nine) in Westminster Abbey, that would require half the expense of Trinity Church to build and fit up. The entire roof is of sculptured marble, displaying a history in figures. By the way, this Abbey, is neither more nor less, than a third class Cathedral, with the addition of cloisters. But built when they were, and shining what they do, the Cathedrals are grand and loveable things. I reiterate it, I could hug the ugliest of the old monks for the exquisite taste.

S. D. C.

Snow Storm in England.

On Tuesday night, at six o'clock, the express train on the York and Newcastle Railway left Darlington, being about an hour and a halt behind its usual time, having been detained by the depth of the snow. The road was heavy all the way, and an additional engine was put to at Belmont; but there was no stoppage caused by the snow till they reached Washington, which they did about 8 o'clock. At the Washington station the train stopped half an hour, and it being reported that the line was passable, the train proceeded; but it had not gone more than half a mile when it was brought to a stand-still. The engine-men and stokers who were prepared with shovels, partially cleared away the snow which had drifted in the path of the engines, and the steam was again put on. Another half mile was got over; but further progress was found to be impracticable. The snow drifted round the carriages with such rapidity, that in a very few minutes it was found impossible to move them either one way or the other, and the snow gathering around the engines, soon extinguished the fires, and rendered all attempts to self extrication hopeless. In this dilemma what was to be done? Two gentlemen, second class passengers, determined on walking onward through the snow; and away they went steering in the direction of the telegraphic wires. As they have not been heard of since it is probable they succeeded, after many difficulties, of course, in reaching their destination, wherever it was. One gentleman, returning from the hymeneal altar, having been married but a few days previously, in London and was bringing home his bride, suggested to his *cara sposa* the expediency of returning to Washington, where a comfortable bed might be found more convenient for repose than the interior of a railway carriage, and the suggestion having been approved, the adventurous pair essayed the difficult and dangerous task. There were other ladies in the train, which comprised fifteen passengers in all, including the two that had already departed, but none thought proper to imitate her example. Five gentlemen escorted the bride and bridegroom, leaving behind them in the train three ladies and three gentlemen, who remained there till noon on Wednesday, when they also repaired to Washington, under the guidance of the engine-drivers, leaving Donaldson, the guard of the train, alone. All parties reached Washington in safety, and found comfortable accommodation at the inn near the station, and at the village in its vicinity. This is, perhaps, the first instance on record of a railway train having been buried in the snow.—*Chronicle.*

Item of Poetic Prose.

Tiberius was inclined to stand *aloof*, when he saw a smith nail a red hot *shoe* on a horse's *hoof*, and thought it would not *do*. The blacksmith laughed at *Tiberius* and said he was a *fool;* and that there was no *harm* in nailing on a shoe rather *warm*. But Tiberius *told him* that should the shoe burn to the *quick*, the horse would be apt to *kick*, and it would be difficult to *hold him:* and if he did'nt give it time to *cool*, it surely would prove *sear*-ious.

Combat between a Horse and a Lion.

A nobleman, in the early part of the reign of Louis XV, having a very vicious horse which none of the grooms or servants would ride,—several of them having been thrown and one killed,—asked leave of his majesty to have him turned loose into the menagerie, against one of the largest lions. The king readily consented, and the animal, on a certain day, was conducted thither. Soon after the arrival of the horse, the door of the den was drawn up, and the lion, with great state and majesty, marched slowly to the mouth of it, when seeing his antagonist, he set up a tremendous roar. The horse immediately startled and fell back; his ears erected, his mane raised, his eyes sparkled, and something like a general convulsion seemed to agitate his whole frame. After the first emotion of fear had subsided, the horse retired to a corner of the menagerie, where, having directed his heels towards the lion, and having reared his head over his left shoulder, he watched with extreme eagerness the motions of his enemy. The lion who presently quitted the den, sidled about for more than a minute, as if meditating the mode of attack, when, having sufficiently prepared himself for the combat, he made a sudden spring at the horse, which defended itself by striking his adversary a most violent blow on the chest. The lion instantly retreated, groaned, and seemed for several minutes inclined to give up the contest, when, recovering from the painful effects of the blow, he returned to the charge with unabated violence. The mode of preparation for this second attack was the same as the first He sidled from one side of the menagerie to the other for a considerable time, seeking a favorable opportunity to seize his prey; during all which time the horse still preserved the same posture and still kept his head erect and turned over his shoulder. The lion at length gave a second spring, with all the strength and velocity he could exercise, when the horse caught him, with his hoof on his under jaw, which he fractured, Having sustained a second and more severe repulse than the former, the lion retreated to his den as well as he was able, apparently in the greatest agony, moaning all the way in a most lamentable manner. The horse was soon obliged to be shot, as no one dared to approach the ground where he was kept.

Specimen of the Orthography of the first printed Bible.

(*Coverdale*, 1535: *Re-printed by Bagster, London*, 1838.)

"Then shal the kyngdome of heauen be like vnto ten virgins, which toke their lapes, and wente forth to mete the brydegrome. But fyue of them were foolish, and fyue were wyse, The foolish toke their lapes, neuertheles they toke no oyle wlth them. But the wyse toke oyle in their vessels with their lapes.—Now whyle the brydegrome taried, they slombred all and slepte. But at mydnight there was a crye made: Beholde, the bryddgrome commeth, go youre waye out to mete him.—Then all those virgins arose, and prepared their lapes. But the foolish sayde unto the wyse; geue vs of youre oyle, for our lapes are gone out. Then answered the wyse, and sayde: Not so, lest there be not ynough for vs and you, but go rather vnto them that sell and bye for youre selues. And whyle they wente to bye, the brydegrome came: and they that were readye, wente in with him vnto the mariage, and the gate was shut vp. At ye last came ye other virgins also, and sayde:—LORDE LORDE, ope vnto vs. But he answered, and sayde: Verely I saye unto you, I knowe you not. Watch ye therfore, for ye knowe nether the daye nor yet the houre whan ye sonne of man shal come."—Matthew, 25: 1--13.

Poetry and Prose.

Behold my Flora how glorious nature looks in her beauty? The trees are filled with blossoms, the woods are dressed in green livery, and the plain is carpeted with grass and flowers. "Yes, Charles, I was thinking of the same thing. These flowers are dandelions, and when they are gathered and put into a pot, with a piece of fat pork, they make the best greens in the world."

The citizens of Pensacola have held a meeting to discountenance the employment of slave mechanics on the government works.

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TO CORRESPONDENTS.

We have a variety of answers to correspon dents prepared, but on account of the arrival of important communications at a late hour, they are unavoidably deferred to next week, when the many favors of correspondents will be amply noticed. A very interesting portion of the meteorological observations communicated by Prof. Meriam, is with regret deferred for the same reason. Look out for a rich number next week.

"E. B. of T."—Accept our thanks for your communication with illutrations of a novel and rational mode of propelling vessels. In order to establish evidences of priority in this invention, it may be advisable to have it represented by an engraving as well as description. We can furnish an engraving, corrected in its proportions, for two dollars,—charging nothing for description and insertion.

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Columbian Magazine.

The March number is received and is equal to any thing in the line of elegant literary publications. The embellishments, comprising the "Glee Maiden," "The Anglers," (by David,) and the Paris Fashions, appear in a style peculiar to this work. A beautiful song with music, by Miss White, and the literary contributions of Mrs. Child, Stephens, Goodman, Sigourney, Mason Osgood, Fanny Forrester and others, render this number peculiarly desirable for all lovers of literary excellence: published by Israel Post, 140 Nassau st.

"The Path Finder," is the title of a useful business paper, published weekly at Boston, by Crowley & Holbrook;—terms $1 per year. It is nearly filled with advertisements, arranged and printed in excellent style of typography, and having a large circulation, affords an excellent medium for business notices.

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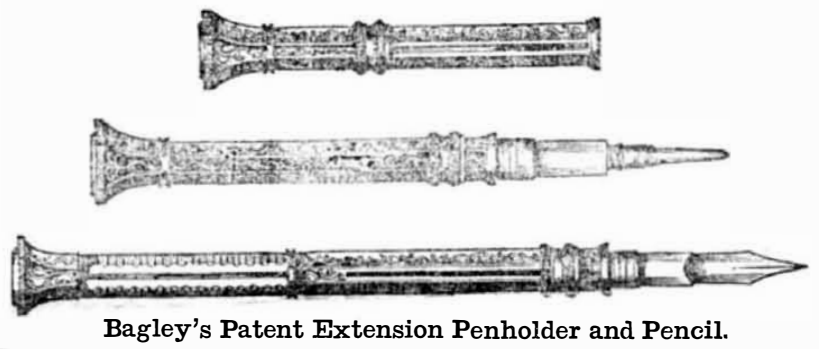

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The Weight of Air.

To the great majority of our race, the fact is unknown that air has weight; and the announcement, to them, of such a proposition, would be received with the most unbounded derision. The idea that the invisible fluid in which "we live and move and have our being," and without which breathing would be below par, should be possessed of a property in common with all ponderable substances, and capable of being weighed in a balance and *not* found wanting, is so preposterous, that the ignorant mind is staggered at the declaration, and utterly refuses to give it the slightest credence. Yet that same mind will believe a spook story, and swallow the most incredible tales of giants and ogres, of "ghosts or goblins damned," that can be conceived by his fellow. Such a state of human intellect is sad indeed; but thank heaven the lights of Revelation and Science are calculated to illumine and expand the mind; and as ages roll on, the brightness and powers of their vivifying beams will leave few among enlightened nations to doubt the sublimer truths that investigations have bro't and will yet bring to the knowledge of man.

By careful experiments, it has been found that 100 cubic inches of atmospheric air, weighs 31 grains—or 815 times less than an equal bulk of water.

The weight or pressure of the atmosphere was first demonstrated by Torricelli, a celebrated Italian philosopher. His attention was drawn to the subject by the attempt of a well-digger, at Florence, to raise water by a sucking pump to a height exceeding 33 feet. The well digger failed in his enterprise, and applied to Torricelli for advice; who, seeing the absurdity of the conclusion of the philosophers of his day, that *Nature abhorred a vacuum*, and only to the extent of 33 feet, suspected that the cause of the ascent in the tube might be the pressure of the atmosphere, and that a column of water of about that height was sufficient to equipoise the air. He concluded that if this were the case, it would only support a shorter column of any denser fluid; and he immediately had recourse to experiment to confirm his conjecture. He filled a glass tube, three feet long, and closed at one end, with quicksilver, and inverted it in a basin of the same fluid; it immediately sank about six inches from the top of the tube, proving that the pressure of the atmosphere which could support a column of water of about 33 feet in height, would only support a column of mercury of 30 inches, the weight of the columns being in exact proportions to the specific gravity of the two liquids, or as 13 1-2 to 1.

The atmosphere presses upon the surface of the earth, and upon the surfaces of all bodies which are plunged into it, with the same force as that by which it supports the mercury in the barometer, and a column of mercury, 30 inches in height, whose base is one square inch, would weigh about 15 lbs.; and would press upon the earth with the same force; every body, therefore, upon the surface of the earth, at the level of the sea, supports an average pressure of 15 lbs., upon every square inch of its surface. That we are not sensible of this pressure on our own persons, and on all surrounding objects, is owing to its equality in all directions. We may destroy this equilibrium, as in the air pump, for example; where almost the first stroke of the pump fixes the receiver to the plate; and after the air has been exhausted to the utmost, we may raise the weight of the pump itself without detaching it. The atmospheric engine, in which the air is exhausted by various means behind the piston, is another instance. The simple plaything of the school boy—the *leather sucker*—is an exemplification of the pressure of the atmosphere. In the act of pulling it up, he forms a void space beneath, which must be destitute of air—in other words a *vacuum*.—The air outside presses upon the leather in its endeavor to fill that vacuum, and the harder the boy pulls, the tighter it sticks, because the edges are pressed with a greater external weight to their points of contact.

This property of the aeriform fluid which surrounds the earth, was unknown until the time of Gallileo and Torricelli. At the most, Aristotle had but a faint idea of it, just as, at a latter period, Seneca had some notion of its elasticity. Yet we find, by reference to Scripture, that "*God gave to the air its weight*, and to the water its just measure." Thi weight attributed to the air, has appeared so extraordinary to all the interpreters of the Book of Job, where it is literally stated, that, from not being able to comprehend it, they have altogether misinterpreted it. All of them have translated the expression *rouach*, which properly signifies the air, or aeriform layer which environs the globe, by the term *wind*. This they have doubtless been led to do, because they could not conceive how the air could be *heavy*. If the old interpreters had understood the 7th verse of the 135th Psalm, they would not have so blundered in the translation. The Psalmist there praises God, "Because he maketh lightnings for the rain, and because he causeth the vapors to ascend from the ends of the earth, and bringeth the winds out of his treasury." What causes the ascent of the visible aqueous vapors through the air, but their *lightness?* Both must therefore be *heavy*; and the heaviest, in this case, is the one apparently the most destitute of it.—*Mechanic's Advocate.*

Pure Water.

Undoubtedly the purest natural water is that obtained from melted snow, especially that which falls in distant uninhabited places where the atmosphere is pure and unimpregnated with smoke and other extraneous substances, as is always the case in the immediate vicinity of cities and large towns. "The characters of absolute pure water," says a distinguished chemist, "are—that it is perfectly transparent and colorless, limpid, not sparkling, insipid, unpleasant, and sickly to the taste, and is lighter than common river or spring water.—One hundred cubic inches of water weigh two hundred and fifty-two and a half grains; it is eight hundred and twenty-eight times heavier than air; and, when expanded into steam, occupies seventeen hundred times its previous space."

Perfectly pure water, when required for the operations of the chemist, is obtained by the distillation of river water in glass vessels, that is, expanding into steam by subjecting it to heat, and then condensing it by passing it through cold pipes. The decomposition of water is affected by passing it through pipes previously heated to redness.

In this process the oxygen it contains forms a union with the metal (*iron*) of the pipes, and the hydrogen escapes and may be collected in the form of a gas. Water may be *made*, and this indeed is affected in every instance, "in which a combustible body unites with the oxygen of the atmosphere."

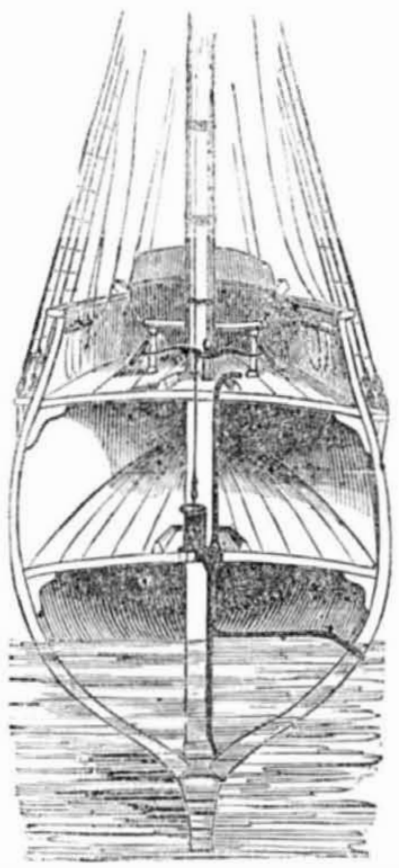
Mechanics among the Ancients.

The town of Pompeii was supplied with water by means of pipes of iron, lead and of baked clay. The museum of the dug out city contains a bronze cock, of a large size, which has two communicating pipes. The splashing of water, which has been so long hermetically sealed, can now be heard in it. It is proved, both by the fountains and fresco painting, that the Pompeiians were acquainted with that law of water, which causes the fluid flowing in a pipe to ascend to the level of its source. It has always been gravely asserted that this property was not known to them, or it is presumed they would not have carried their aqueducts over such stupendous arches of masonry. Perhaps in some of these cases, there may have been labor lost, but they must have known well the impossibility of making masonry to resist the hydrostatic pressure where there was a great head of water.

Shoeing Horses in Winter.

In Canada where winter is never of a less duration than five months: they shoe their horses in the following manner:—The smith fixes a small piece of steel on the fore part of each shoe, which turns up one fourth of an inch, in the shape of a horse's lancet, the same to the hinder part of the shoe, turned up a little higher than the forepart, tempered in the same manner. In going up a hill the fore part gives a purchase that assists the horse, and in going down hill prevents him sliding forward.

SHIP PUMPS.



In this cut is represented a vertical section of a ship, showing a pump on the birth deck, a pipe leading down into the run, and continued above the pump to the deck of the ship. The pump is worked by a double brake, with poles at each end of sufficient length for 8 or 10 men. A pipe leads from the pump below the berth deck, alongside the carline through the side of the ship. A cock or slide valve is inserted in the pipe near the ship's side. To the pipe immediately above the upper deck is attached by a screw, a copper gooseneck having a male screw on the end—the gooseneck and screw for the purpose of attaching hose for washing decks, filling water closets, reservoirs, cleansing the hold, filling casks for ballast, or for wetting sails. The pump with 8 men will throw water to the royal of the largest ships. For all the above purposes, the cock or slide valve in the side of the ship is opened and the water drawn from overboard. When the valve is closed, the pump may be used to clear out the ship as ordinary pumps. A pipe may be connected with the pipe above the pump and that which passes through the side of the vessel, and in case of a leak in the ship, the water can be discharged on a level with the water on the outside, instead of raising to the upper deck as now done—a saving of half the power necessary to clear the vessel. The gooseneck unscrews even with the deck, and is only employed when hose is used, or for filling pails. The brakes unship, and may be put against the bulwarks out of the way. A single brake for one or two men may be used ordinarily.—Ship pumps of the kind in general use are of wood, and from 4 to 5 inch chambers, and are only used for clearing the ship when she leaks. Other pumps are used for other purposes, for head and stern pumps, and many East India ships carry engines purposely for wetting sails, &c. One double acting pump of the size of the old fashioned wooden ones will throw more than double the quantity of water, and may be used by one man or the whole ship's crew, and will perform all the duty of head, stern and centre pumps, and engine; while it is more easily kept in order and takes up less room, and what is of the utmost importance, in case a vessel spring a leak you have something to depend upon to keep the ship clear.—*Farnam's Hydraulics.*

Weights and Measures in Schools.

In Holland I saw what I have never seen elsewhere, but that which ought to be in every school—the actual weights and measures of the country. These were used not only as a means of conveying useful knowledge, but of mental exercise and cultivation. There were seven different liquid measures, graduated according to the standard measure of the kingdom. The teacher took one in his hand, held it up before the class, and displayed it in all its dimensions. Sometimes he would allow it to be passed along, by the members of the class, that each one might have an opportunity to handle it, and to form an idea of it.; capacity. Then he would take another, and either tell the class how many measures of one kind would be equivalent to one measure of the other, or, if he thought them prepared for the questions, he would obtain their judgement upon the relative capacity of the respective measures. In this way he would go through the whole series, referring from one to another, until all had been examined, and their relative capacities understood. Then followed arithmetical questions, founded upon the facts they had learned—such as, if one measure full of wine costs so much, what would another measure full cost, (designating the measure,) or four, or seven other measures full?—The same thing was then done with the weights. It is easy to see how much more exact and permanent would be the pupils knowledge of all weights and measures, obtained in this way, than if learned by heart from the dry tables in a book; and also how many useful and interesting exercises could be founded upon them by a skilful teacher. I believe it would be difficult to find many men in the community, of middle age, who can now repeat all those tables of weights and measures, which, as schoolboys, they could rehearse so volubly; or who, were they now to see actual sets of weights and measures, could call all the different ones by their true names, or distinguish each denomination from the others if not seen in juxta-position with them. Having learned the tables by wrote, the words have long ago vanished from the mind, and the ideas were never in it.—*Horace Mann.*

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